UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

ECOLOGICAL SITE DESCRIPTION

ECOLOGICAL SITE CHARACTERISTICS

Site Type: Rangeland

Site ID: R070XB066NM

Site Name: Gyp Upland

Precipitation or Climate Zone: 13 to 16 inches

Phase:

PHYSIOGRAPHIC FEATURES

Narrative:

This site is characterized by flat to moderately rolling or unevenly sloping terrain. Drainage channels may dissect the site, but slopes do not exceed 15 percent. Elevation ranges from 4,200 to 4,800 feet above sea level. Exposure varies and is not significant.

Land Form:

1. Plain
2. Erosion remnant
3.

Aspect:

1. N/A
2.
3.

	Minimum	Maximum
Elevation (feet)	4,200	4,800
Slope (percent)	1	>15
Water Table Depth (inches)	N/A	N/A

Flooding:	**Minimum**	**Maximum**
Frequency	N/A	N/A
Duration	N/A	N/A

Ponding:	**Minimum**	**Maximum**
Depth (inches)	N/A	N/A
Frequency	N/A	N/A
Duration	N/A	N/A

Runoff Class:

Negligible to medium.

CLIMATIC FEATURES

Narrative:

The climate of this area can be classified as "semi-arid continental".

Annual average precipitation ranges from 13 to 16 inches. About seventy eight percent of the moisture usually falls during the six-month period of May through October. Most of this summer precipitation falls in the form of brief and heavy afternoon and evening thunderstorms. Hail may accompany the more severe summer storms. In the winter, there is normally only one day a month when as much as one-tenth inch of moisture falls, usually in the form of snow. Snow seldom lies on the ground for more than a few days.

Temperatures are characterized by a distinct seasonal change and large annual and diurnal temperature ranges. Summers are moderately warm. Maximum temperature average above 90 degrees F from July to August and an average summer includes about 80 days with high readings exceeding 90 degrees F and 10 days with readings above 100 degrees F. Temperatures usually fall rapidly after sundown and low of 60 degrees F on most summer nights. Winters are mild, sunny and dry. Daytime shade temperatures in midwinter usually rise to the 50's. However, freezing temperatures normally occur at night from mid-November to mid-March.

The freeze-free season ranges from 190 to 197 days. Dates of the last freeze are April 11th to April 17th and the first freeze varies from October 20th to October 25th.

Both temperature and rainfall distribution favor warm-season, perennial plant communities in the area. However, sufficient late winter and early spring moisture allows a cool-season species to occupy a minor component within the plant community

Climate data was obtained from http://www.wrcc.sage.dri.edu/summary/climsmnm.html web site using 50% probability for freeze-free and frost-free seasons using 28.5 degrees F and 32.5 degrees F respectively.

	Minimum	Maximum
Frost-free period (days):	164	196
Freeze-free period (days):	190	218
Mean annual precipitation (inches):	13	16

Monthly moisture (inches) and temperature (^{0}F) distribution:

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	0.23	0.46	21.6	57.3
February	0.30	0.44	24.0	59.2
March	0.46	0.65	29.1	68.0
April	0.36	0.92	36.3	78.3
May	0.42	1.68	45.7	82.6
June	1.20	1.86	52.2	91.2
July	2.03	2.73	59.1	92.9
August	2.09	2.75	58.1	91.0
September	1.65	1.92	51.1	84.8
October	1.23	1.93	40.1	74.7
November	0.46	0.88	28.9	63.0
December	0.37	0.62	22.1	54.6

Climate Stations:

					Period		
Station ID	290205	Location	Alamogordo Dam, NM	From:	1972	To:	2000
Station ID	293292	Location	Fort Sumner, NM	From:	01/01/14	To:	2000
Station ID	297254	Location	Ramon 8SW, NM	From:	03/04/57	To:	122/31/01
Station ID	298596	Location	Sumner Lake. NM	From:	01/0121	To:	12/31/01
Station ID	299851	Location	Yeso, NM	From:	01/01/48	To:	12/31/01

INFLUENCING WATER FEATURES

Narrative:

This site is not influenced by water from a wetland or stream.

Wetland description:

System	Subsystem	Class
N/A		

If Riverine Wetland System enter Rosgen Stream Type:

N/A

REPRESENTATIVE SOIL FEATURES

Narrative:

These soils are shallow and very shallow over gypsum. The surface layer is loam or silt loam about 8 inches thick. The available water-holding capacity is very low. Permeability is moderate. There are few areas of deeper soils. Gypsum outcrop is common.

Parent Material Kind: Marine Deposits
Parent Material Origin: Gypsum

Surface Texture:

1. Silty loam
2. Loam
3.

Surface Texture Modifier:

1. N/A
2.
3.

Subsurface Texture Group: Gypsum
Surface Fragments <=3" (% Cover): N/A
Surface Fragments >3" (% Cover): N/A

Subsurface Fragments <=3" (%Volume): N/A
Subsurface Fragments >=3" (%Volume): N/A

	Minimum	Maximum
Drainage Class:	Well	Well
Permeability Class:	Moderately slow	Moderately slow
Depth (inches):	<10	>72
Electrical Conductivity (mmhos/cm):	2.00	16.00
Sodium Absorption Ratio:	N/A	N/A
Soil Reaction (1:1 Water):	7.4	8.4
Soil Reaction (0.1M CaCl2):	N/A	N/A
Available Water Capacity (inches):	3	6
Calcium Carbonate Equivalent (percent):	N/A	N/A

PLANT COMMUNITIES

Ecological Dynamics of the Site:

Plant Communities and Transitional Pathways (diagram)

Plant Community Name: Historic Climax Plant Community

Plant Community Sequence Number: 1 **Narrative Label**: HCPC

Plant Community Narrative: Historic Climax Plant Community
This site is grassland dominated by warm-season short and mid-grasses. Indicator plants for this site are gyp grama, gyp dropseed and coldenia. Shrubs and forbs make up a minor component of the plant community.

Canopy Cover:	
Trees	0
Shrubs and half shrubs	5 %
Ground Cover (Aveage Percent of Surface Area).	
Grasses & Forbs	20
Bare ground	45
Surface gravel	10
Surface cobble and stone	0
Litter (percent)	20
Litter (average depth in cm.)	2

Plant Community Annual Production (by plant type):

Annual Production (lbs/ac)

Plant Type	Low	RV	High
Grass/Grasslike	298	531	765
Forb	35	63	90
Tree/Shrub/Vine	18	31	45
Lichen			
Moss			
Microbiotic Crusts			
Total	350	625	900

Plant Community Composition and Group Annual Production:

Plant Type - Grass/Grasslike

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
1	BOER4 BOBR	Black Grama Gyp Grama	81 – 94	81 – 94
2	BOGR2 SPNE	Blue Grama Gyp Dropseed	63 – 88	63 – 88
3	PLMU3	Tobosa	50 – 63	50 – 63
4	SPAI	Alkali Sacaton	31 – 44	31 – 44
5	BOCU BOBA3	Sideoats Grama Cane Bluestem	19 – 31	19 – 31
6	ARIST	Threeawn spp.	19 – 31	19 – 31
7	MUPO2 SEVU DAPU7 SPCR	Bush Muhly Plains Bristlegrass Fluffgrass Sand Dropseed	6 – 13	6 – 13

Plant Type - Forb

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
8	TIQUI	Coldenia spp.	25 – 38	25 – 38
9	ISPL ERIOG	Rayless Goldenrod Buckwheat spp.	0 – 19	0 – 19
10	OXYTR	Locoweed spp.	0 – 6	0 – 6
11	2FP	Other Perennial Forbs	6 – 19	6 – 19
12	2FA	Other Annual Forbs	13 – 25	13 – 25

Plant Type – Tree/Shrub/Vine

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
13	ATCA2 EPVI	Fourwing Saltbush Mormon-tea	6 – 19	6 – 19
14	MIERX GUSA2 YUCCA KRLA2 OPPO	Javelinabush Broom Snakeweed Yucca spp. Winterfat Plains Pricklypear Cactus	6 – 19	6 – 19

Plant Type - Lichen

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Moss

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Type - Microbiotic Crusts

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Plant Growth Curves

Growth Curve ID 4015NM

Growth Curve Name: HCPC

Growth Curve Description: Grassland with warm-season short and mid-grasses and minor components of shrubs and forbs.

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	3	5	5	10	25	30	15	7	0	0

ECOLOGICAL SITE INTERPRETATIONS

Animal Community:

Habitat for Wildlife:

This site provides habitat, which support a resident animal community that is characterized by spotted skunk, black-tailed jackrabbit, desert cottontail, white-throated woodrat, common raven, roadrunner, loggerhead shrike, collared lizard, checkered whiptail and western diamondback rattlesnake. There is seasonal use by mule deer and pronghorn antelope.

Hydrology Functions:

The runoff curve numbers are determined by field investigations using hydrologic cover conditions and hydrologic soil groups.

Hydrologic Interpretations	
Soil Series	**Hydrologic Group**
Holloman	D
Hollomex	B

Recreational Uses:

The recreation potential on this site is limited due to the fragile plant community. Off-road vehicles should be discouraged. Hunting for upland birds is poor to fair. Rock hunting for gyp crystals, "Pecos Valley Diamonds", is fair to good on the areas of gyp outcrops.

Wood Products:

This site produces no wood products

Other Products:

Grazing:

This site can be grazed at any season of the year by all classes of livestock, generally without regard to age. This site has limited potential as a grazing resource. This site can be easily damaged by heavy grazing pressure causing a loss in cover and deterioration of the plant community to gyp grama, gyp dropseed and coldenia to become completely dominate. Further deterioration usually takes place, which reduces this stand and the loss of soil causing bare gypsum surface. Grazing management should be designed to maintain an adequate plant cover to prevent soil erosion. Due to the site's low potential to produce forage, this site should not be exposed to heavy grazing pressure. A system of deferred grazing by domestic livestock, which varies the season of grazing and rest during successive years, is needed to maintain the plant community. Approximately 70 percent of the annual yield are from species that furnish forage for livestock. This site provides good nutrition to livestock during the winter; but care must be taken to overgrazed during this period.

Other Information:

Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month

Similarity Index	Ac/AUM
100 - 76	6.5 – 9.5
75 – 51	7.4 – 16.0
50 – 26	9.4 – 32.0
25 – 0	32.0 +

Plant Part	Code	Species Preference	Code
Stems	S	None Selected	NS
Leaves	L	Preferred	P
Flowers	F	Desirable	D
Fruits/Seeds	F/S	Undesirable	U
Entire Plant	EP	Not Consumed	NC
Underground Parts	UP	Emergency	E
		Toxic	T

Plant Preference by Animal Kind:

Animal Kind: Livestock
Animal Type: Cattle

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Blue Grama	Bouteloua gracilis	EP	D	D	D	D	P	P	P	P	P	D	D	D
Black Grama	Bouteloua eriopoda	EP	P	P	P	D	D	D	D	D	D	D	P	P
Sand Dropseed	Sporobolus cryptandrus	EP	D	D	D	D	D	D	D	D	D	D	D	D
Plains Bristlegrass	Setaria vulpiseta	EP	D	D	D	D	P	P	P	P	P	D	D	D
Sideoats Grama	Bouteloua curtipendula	EP	P	P	P	P	P	P	P	P	P	P	P	P
Bush Muhly	Muhlenbergia porteri	EP	P	P	P	D	D	D	D	D	D	D	P	P
Alkali Sacaton	Sporobolus airoides	EP	D	D	D	P	P	P	D	U	U	U	U	D
Winterfat	Krascheninnikovia lanata	L/S	D	D	D	P	P	P	P	P	P	D	D	D
Fourwing Saltbush	Atriplex canescens	L/S	P	P	P	P	D	D	D	D	D	D	P	P

Animal Kind: Livestock
Animal Type: Horse

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Blue Grama	Bouteloua gracilis	EP	D	D	D	D	P	P	P	P	P	D	D	D
Black Grama	Bouteloua eriopoda	EP	P	P	P	D	D	D	D	D	D	D	P	P
Sand Dropseed	Sporobolus cryptandrus	EP	D	D	D	D	D	D	D	D	D	D	D	D
Plains Bristlegrass	Setaria vulpiseta	EP	D	D	D	D	P	P	P	P	P	D	D	D
Sideoats Grama	Bouteloua curtipendula	EP	P	P	P	P	P	P	P	P	P	P	P	P
Bush Muhly	Muhlenbergia porteri	EP	P	P	P	D	D	D	D	D	D	D	P	P
Alkali Sacaton	Sporobolus airoides	EP	D	D	D	P	P	P	D	U	U	U	U	D

Animal Kind: Livestock
Animal Type: Sheep

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Blue Grama	Bouteloua gracilis	EP	D	D	D	D	P	P	P	P	P	D	D	D
Black Grama	Bouteloua eriopoda	EP	P	P	P	D	D	D	D	D	D	D	P	P
Plains Bristlegrass	Setaria vulpiseta	EP	D	D	D	D	P	P	P	P	P	D	D	D
Sideoats Grama	Bouteloua curtipendula	EP	P	P	P	P	P	P	P	P	P	P	P	P
Bush Muhly	Muhlenbergia porteri	EP	P	P	P	D	D	D	D	D	D	D	P	P
Winterfat	Krascheninnikovia lanata	L/S	P	P	P	P	P	P	P	P	P	P	P	P

Animal Kind: Wildlife
Animal Type: Antelope

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Locoweed	Oxytropis spp.	EP	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S

Animal Kind: Wildlife
Animal Type: Deer

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Winterfat	Krascheninnikovia lanata	L/S	D	D	D	D	D	D	D	D	D	D	D	D

SUPPORTING INFORMATION

Associated sites:

Site Name	Site ID	Site Narrative

Similar sites:

Site Name	Site ID	Site Narrative

State Correlation:

This site has been correlated with the following sites: _____

Inventory Data References:

Data Source	# of Records	Sample Period	State	County

Type Locality:

State: **New Mexico**

County: **Chaves, De Baca**

Latitude: _____

Longitude: _____

Township: _____

Range: _____

Section: _____

Is the type locality sensitive? **Yes** ☐ **No** ☐

General Legal Description: _____

Relationship to Other Established Classifications:

Other References:

Data collection for this site was done in conjunction with the progressive soil surveys within the Pecos-Canadian Plains and Valleys 70 Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys: San Miguel, Quay, Guadalupe, De Baca and Chaves.

Characteristic Soils Are:	
Holloman	Hollomex
Other Soils included are:	

Site Description Approval:

Author	Date	Approval	Date
Don Sylvester	07/26/78	Don Sylvester	07/26/78

Site Description Revision:

Author	Date	Approval	Date
Elizabeth Wright	12/03/02	George Chavez	2/11/03